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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/809,770 | 03/25/2004 | James J. Finley | 1840A1 | 7943 |

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EXAMINER

BLACKWELL RUDASIL, GWENDOLYN A

ART UNIT PAPER NUMBER

1775

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,770

Applicant(s)

FINLEY, JAMES J.

Examiner

Gwendolyn Blackwell

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23, 26-28, 30 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-23, 26-28, 30 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group III in the reply filed on May 15, 2006 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20-21, 26-27, 33, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent no. 4,992,087, Holscher.

Regarding claims 20, 26, and 35

Holscher disclose a coating formed on a glass substrate wherein the coating is comprised of a coating of Al-Ti formed on a chromium (infrared reflecting) layer on a substrate. Aluminum is present in the amount of 60 at%, (column 3, lines 34-56). As the coating is an outermost coating exposed to the atmosphere it would be expected that the coating would oxidize to a certain extent due to the high aluminum content, meeting the limitations of claims 20, 26, and 35.

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Regarding claims 21, 27, and 33

In addition to the Al-Ti layer formed on the chromium layer on a substrate, a layer of tantalum pentoxide can be inserted between the chromium layer and the substrate, (column 3, lines 21-30), meeting the limitations of 21, 27, and 33.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20-23, 26-28, 30, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent no. 6,007,901, Maschwitz et al further in view of United States Patent no. 4,992,087, Holscher.

Regarding claim 20-21, 26-28, 33, and 35

Maschwitz et al disclose a heat reflecting fenestration product with color corrective and corrosion protective layers (functional coating) wherein the coating is comprised of a first outer dielectric layer, an infrared reflecting metal layer, a color correcting metal layer, a protective layer, one or more subcomposite, and a second outer dielectric layer, (column 2, lines 31-48). The protective layer is made from a metal such as Al, Ti, Zr, Ni, Hf, Ta, W, and alloys thereof, (column 2, lines 62-67). The protective layer will be oxidized through the subsequent deposition of the dielectric layers, (column 5, lines 47-60). Maschwitz et al do not specifically disclose using TiAl as the protective layer or the amount of Al in the TiAl alloy.

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While the amount of Al is not specifically disclosed, absent a showing of criticality with respect to the amount of Al (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the amount of Al in conjunction with the Ti through routine experimentation in order to achieve a composite protective layer that is degradation resistant while balancing the expense of the materials used, (columns 5-6, lines 62-2). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (claims 25-26 and 32-33).

Regarding claims 22-23, 30, and 34

The color correcting layer can be Cr, Co, Ni, Zn, Pd, In, Sn, An, Pl, Bi, and alloys thereof, (column 5, lines 30-37) (claims 22 and 34). The infrared reflecting material layer is comprised of Ag, Au, Cu and alloys thereof, (column 2, lines 54-56) (claims 23 and 30).

Response to Arguments

6. Applicant's arguments file May 15, 2006 in light of the Applicant's amendments are persuasive with regards to US 2003/0012963, Ebisawa and the rejections relying upon such is withdrawn.

Applicant's arguments filed May 15, 2006 have been fully considered but they are not persuasive with respect USPNs 4,992,087, Holscher and 6,007,901, Maschwitz.

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Applicant contends that neither reference discloses a Ti-Al containing layer consisting essentially of oxides, nitrides, and oxynitrides of titanium and aluminum having at least 20-60 at% aluminum.

This is not persuasive as the coating of Holscher is an outermost coating that is exposed to the atmosphere, which would be expected to oxidize a portion of the surface of the coating to a certain extent due to the high aluminum content. Absent a showing to contrary, the Holscher rejection is maintained.

With regards to Maschwitz, the metal of the protective layer will oxidize once the dielectric layers have been deposited. Because of the subsequent oxidation, the limitations of the claims have been met.

7. For the reasons set forth above, the rejections under Holscher and over Maschwitz are maintained.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Blackwell whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gwendolyn Blackwell
Examiner
Art Unit 1775

gab


JENNIFER C. MCNEIL
SUPERVISORY PATENT EXAMINER
8/4/06